



U.S. DEPARTMENT OF
ENERGY

**Presentation to the Savannah River Site
Citizens Advisory Board
Plutonium Ship to WIPP
HB-Line Mission**

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EM *Environmental Management*
safety ❖ performance ❖ cleanup ❖ closure

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Background

- **The Office of Environmental Management has up to ~ 5MT of surplus non-pit plutonium that is not currently suitable as feed to the Mixed Oxide Fuel Fabrication Facility (MFFF).**
 - **Approved Interim Action allows disposition of up to 85 kgs of the ~5MT**
 - **NEPA approval required for dispositioning additional Plutonium**

- **There have been several disposition plans for this material and the latest one was to dissolve in H Canyon, transfer to the sludge batch tank, and incorporate into the high level waste glass.**

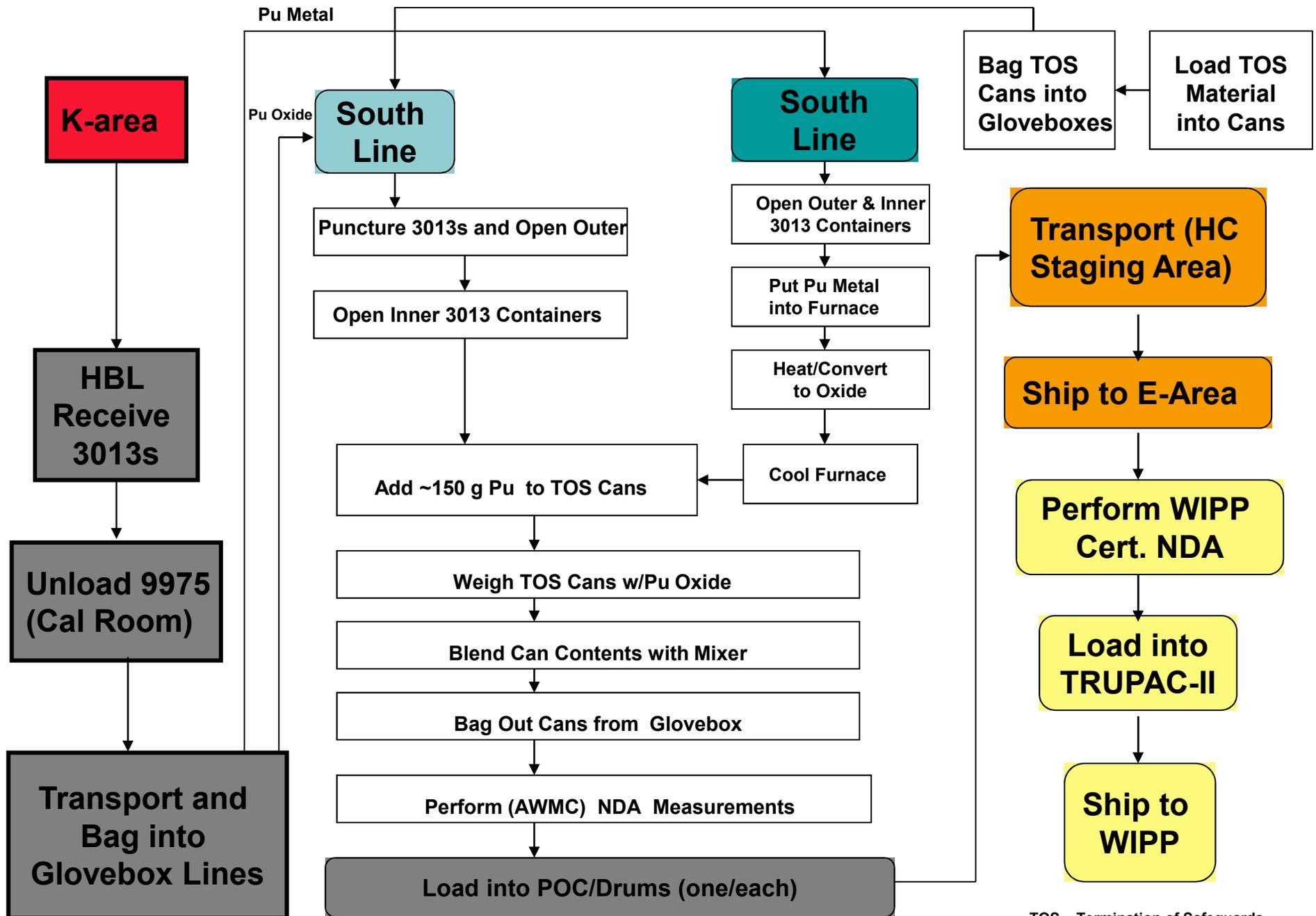


Current Plan

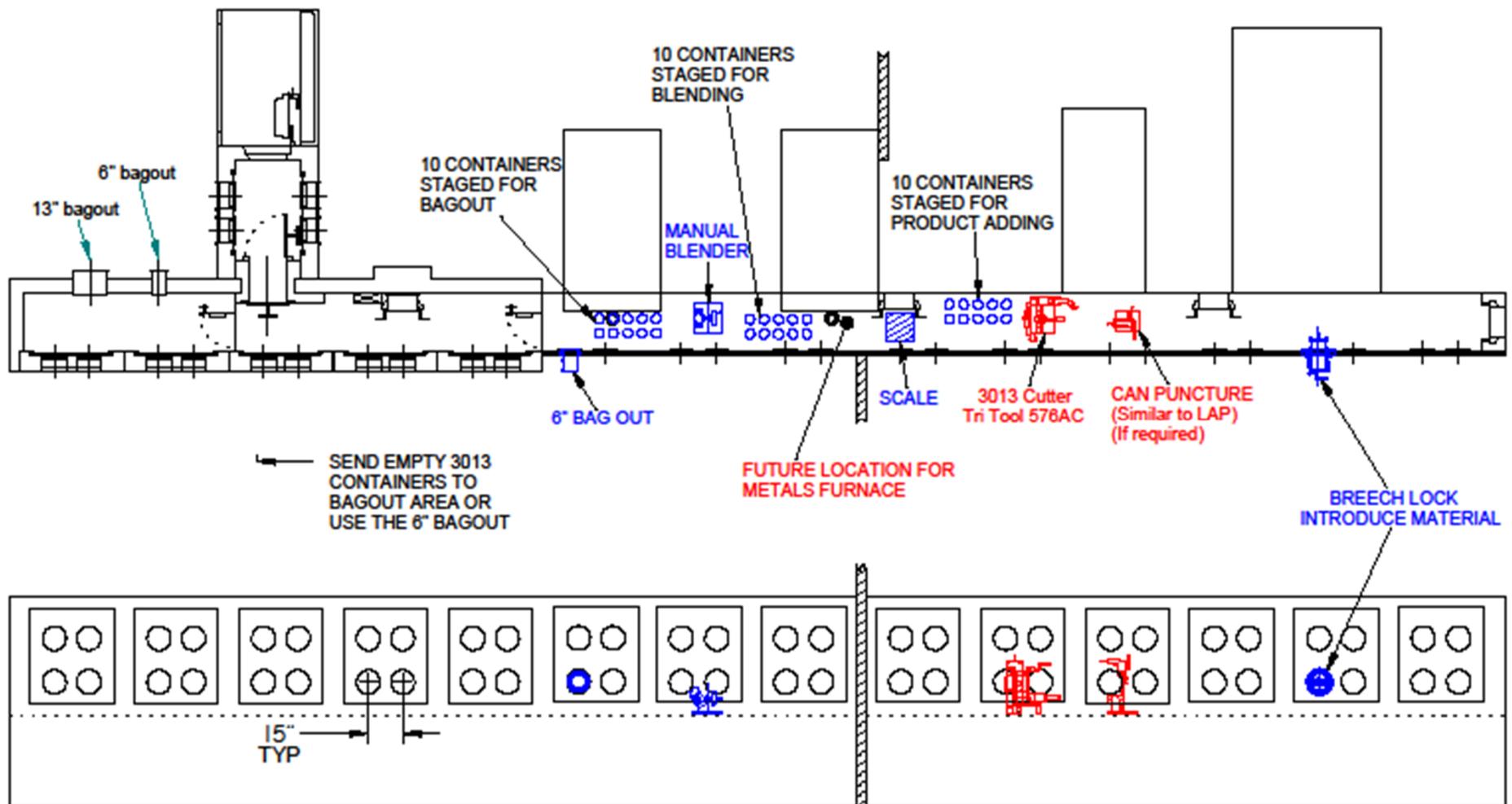
- **Savannah River has identified an approach to dispositioning some or all of this material by downblending and shipping to WIPP for disposal that appears to be more cost effective.**
- **This option not only is more cost effective, it allows the material to be dispositioned earlier, and allows the material to be removed from the State of South Carolina in a more timely manner.**



HB-LINE WIPP REPACKAGING FLOW SHEET



TOS – Termination of Safeguards



BLUE - ADDITIONS FOR WIPP DEMONSTRATION

RED - ADDITIONS NEEDED FOR FULL SCALE WIPP

Option Descriptions

- **Evaluating use of HB-Line**
 - Utilize up to three of the existing HB-Line glovebox lines and ventilation system
 - Blend the plutonium oxide to less than 10% plutonium
 - Oxidize plutonium metal as required
 - Package into Pipe Overpack Containers
 - Ship to E Area for WIPP certification and loading into TRUPAC II container

- **Demonstration**
 - Utilize one of the three gloveboxes
 - Expect to prepare 1 shipment this fiscal year
 - Interim Action amended to allow disposition of initial ~ 85 kgs 3013 surveillance material

- **Full Campaign**
 - Utilize up to three gloveboxes
 - Process approximately 200 kgs Pu per year with one glovebox and up to 600 kgs per year if three gloveboxes are used
 - Additional NEPA is required in order to process balance of the non-Moxable Pu Inventory.

